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EXAMINER	
TSUI, WILSON W	

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/526,069	KARBY, AMIR	
	Examiner	Art Unit	
	Wilson Tsui	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20050228*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is filed in response to the application filed on: 2/28/2005, IDS filed 2/28/2005, and preliminary amendment filed 2/28/2005.

2. Claims 1-21 are pending. Claims 1, 8, and 15 are independent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4, 6, 8-11, 13, 15-18, and 20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-4, 6, 8-11, 13, 15-18, and 20, the phrase "the intent" renders the claims indefinite because it is unclear whether the limitation(s) following or referencing the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With regards to claim 1-7, for the claimed "system" appears to be directed to "computer program *per se*" without hardware. Since the computer program is not embodied in a

computer readable medium, the computer program product is not statutory. See MPEP 2106 Below:

(a) Functional Descriptive Material: "Data Structures" Representing Descriptive Material *Per Se* or Computer Programs Representing Computer Listings *Per Se*

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760(claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1, 8, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell, JR (US Patent: 5,727, 161, issued: Mar. 10, 1998, filed: Sep. 16, 1994) in further view of Khan et al (US Patent 6,157,934).

With regards to claim 1, Purcel, JR. teaches a system comprising:

a) *At least one spreadsheet each with at least one end user editable spreadsheet block each relating to a particular class of an object*: whereas Purcel, JR teaches implementing a spreadsheet modeling system, which includes the use of existing spreadsheet applications (column 9, lines 25-29: whereas the modeling system works with external spreadsheet software). These spreadsheet applications further include spreadsheets that allow for user entry/edits that relate to a particular class of product (column 11, lines 52-62: whereas, spreadsheets can relate to a particular class or component-class for analysis).

i) At least one input spreadsheet cell each associated with an input parameter selected by an end user from a plurality of input parameters: Whereas in Fig. 18, an end user selects from a plurality of input parameters, for which the input parameters in this case are factors affecting a goal/product. Illustratively, in Figure 19, the input parameter/factor's associated cell address is selected as shown next to the 'Factor 1 heading'.

ii) At least one output spreadsheet cell each associated with an output parameter selected by an end user from a plurality of output parameters: Whereas in Fig 18, an end user selects from a plurality of output parameters, for which the output parameters in this case are a list of output Goals. Furthermore, illustratively in Figure

19, an output cell's address that is associated with the output parameter chosen by the user is selected (reference number 1904).

iii) *At least one spreadsheet script for receiving input values from at least one input spreadsheet cell, computing output values of at least one end user selected output parameter, and returning output values to their associated output spreadsheet cells* (column 11, lines 35-67: whereas, Purcel, JR's spreadsheet system implements a spreadsheet system that automatically updates output values that are associated with output spreadsheet cells located in the same or different spread sheet pages, upon receiving an input value from an input cell). Additionally, since the collecting and output of cells are automatic, it is inherent that computer executable instructions are being executed to perform the functionality that of a script.

b) *A hard coded unification builder for selected linking at least two spreadsheet blocks* (whereas Purcel, JR teaches implementing a spreadsheet modeling system, which includes the use spreadsheet software that link spreadsheet blocks (column 11, lines 35-55: whereas, spreadsheets can link to a set of cells in the same of other spreadsheets)) *in accordance with* specific factors/parameters and goals (Fig 18, whereas the factors/parameters and are chosen with respect to a particular goal) *to generate at least one unified spreadsheet* (whereas a final plan model spreadsheet is generated by linking together other plan model spread sheets either manually (Fig 8, column 18, lines 10-24)) or automatically (whereas linking is performed based on the input and output factors selected (Fig 9, column 18, lines 21-26: whereas

alternative linking is based also on user selection such as indicated in Fig 9.)) *enabling the chaining of spreadsheet blocks* (Fig 19: as a result of end user selection/parameters, corresponding spreadsheet cells that relate to various size spreadsheet blocks are linked in the final model spreadsheet).

However, Purcel Jr, does not expressly teach linking *at least two spreadsheet blocks in accordance to an input graph, at least one production item between a pair of constituent spreadsheet blocks*

Khan et al teaches *an input graph* (Fig 3, whereas an input graph is used) *that links at least two spreadsheet blocks in accordance with a unified spreadsheet that chains at least one item of production information item between a pair of constituent spreadsheet blocks*: whereas, a unified spread sheet chains constituent spreadsheets (Fig 1: the spread sheet links spreadsheet blocks to represent the Intent To workflow Production) for which at least one item of production information is exchanged between the constituent spreadsheet blocks (Fig 3: whereas, each class/node produces an output of production such as manager approval-output).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, Jr's spreadsheet modeling system to further use an input graph as a basis for generating a unified spreadsheet for producing at least one unit of production as taught by Kahn et al. The combination of Purcell, Jr and Kahn et al, would have allowed Purcell, Jr's system to have "permitted a user to have graphically established linking of cells to determine the flow of information without having to write lines of programming code (Kahn et al, column 2, lines 11-16).

With regards to claim 8, for a method performing a method similar to that of the system in claim 1, and is rejected under the same rationale.

With regards to claim 15, for a medium storing instructions that when executed, perform a similar method to the system in claim 1, and is rejected under the same rationale.

6. Claims 2-5, 9-12, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell, JR (US Patent: 5,727, 161, issued: Mar. 10, 1998, filed: Sep. 16, 1994) and Khan et al (US Patent 6,157,934) in further view of Takahashi et al (US Patent: 5,513,356, issued: Apr. 30, 1996, filed: Apr. 22, 1991).

With regards to claim 2, which depends on claim 1, Kahn et al and Purcell, JR's spreadsheet modeling system teaches *said object relates to the construction of finished products* (whereas a finished product is in terms of a final output unit of work, and constructed from the results of other producers of work as seen in (Kahn et al, Fig. 3)), and *said unification builder links at least two spreadsheet blocks in accordance with a product description graph logically representing the finished product to generate at least one unified Intent To Production (ITP) spreadsheet*, as explained in claim 1, but do not expressly teach *including at least one feasible production plan for fulfilling the intent.*

However, Takahashi et al teaches a table/spreadsheet production-modeling system (column 7, lines 24-30), which *includes at least one feasible production plan for fulfilling the intent* (Abstract, "The building process is indicated to the operator so that the operator can change a parameter and/or rebuild the procedure"). Takahashi et al further teaches constructing a production plan of parts (column 14, lines 66-67:

whereas, a planned order table is generated in Fig 28 that represents the production plan of parts).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, Jr and Kahn et al's spreadsheet modeling system to further include a production modeling system that further includes the generation of a production plan as taught by Takahashi et al. The combination of Purcell, JR, Kahn et al, and Takahashi et al would have allowed Purcell, JR's system to have made it possible for a user to have "defined the output specification for the information processing based only a knowledge of the business the user is in charge of" (Takahashi et al, column 5, lines 3-9).

With regards to claim 3, which depends on claim 2, Purcell, JR, and Kahn et al both teach *spreadsheet blocks* as explained in claim 1 above, and is rejected under the same rationale. However Purcell, JR, and Kahn et al do not expressly teach a spreadsheet block, *which includes instructions for user, prompts for assisting in the entry of an intent.*

Takahashi et al teaches a spreadsheet/table *which includes instructions for user, prompts for assisting in the entry of an intent* (Fig 17, and Fig 18: whereas, at the bottom of a table block, there are prompts instructing the user how to proceed for a particular entry.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, JR, and Kahn et al's spreadsheet blocks, such that they include prompts for instructing a user as taught by Takahashi et al. The

combination of Purcell, JR, Kahn et al, and Takahashi et al would have allowed Purcell, JR's spreadsheet modeling system to have further allowed "the ability to have received the output specification by the user in an interactive manner" (Takahashi et al, column 13, lines 38-40)

With regards to claim 4, which depends on claim 1, Purcell, JR and Kahn et al teach *said object*, along with *said unification builder* that *links at least two spreadsheet blocks according with a production flow graph of production process, and terminating in the finished product to generate a unified spreadsheet,* as explained in claim 1, and is rejected under the same rationale. However, Purcell, JR and Kahn et al do not expressly teach a system wherein said object *relates to resources available to produce finished products, the production process starting from raw materials, and a* unified *estimation* spreadsheet.

Takahashi et al teaches said object *relates to resources available to produce finished products and the production process starting from raw materials* (whereas, the table/spreadsheet production system uses an input lot table to derive the resources available to produce a final product (column 10, lines 55-58: the knowledge base includes data on parts-raw materials)). Furthermore, the final output table/spreadsheet is a final *estimated spreadsheet*: whereas, input raw material data includes estimated quantities (column 13, lines 60-63), and the final production plan table/spreadsheet (column 14, lines 66-67), therefore is derived from estimated data.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, JR, and Kahn et al's unification builder, such that it

links spreadsheet blocks based on resources and raw materials used to produce a product, and to have modified the parameters for generating a unification spreadsheet such that the parameters are based off of estimated data, as taught by Takahashi et al. The combination of Purcell, JR, Kahn et al, and Takahashi et al, would have allowed Purcell's spreadsheet modeling system to have allowed a user to have inputted fragmental piece information about components/raw materials, it is possible for the user to obtain the content of the information processing without the need of manuals or experts (Takahashi et al, column 16, lines 8-12).

With regards to claim 5, which is dependent on claim 1, Purcell, JR, and Kahn et al teach a system with a *spreadsheet script*, as explained in claim 1, and is rejected under the same rationale. However Purcell, JR, and Kahn et al do not expressly teach the spreadsheet script *defines an end user defined intermediate parameter having a computed value in accordance with a given set of input values which is capable of being manually overwritten by an end user.*

Takahashi et al teaches *an end user defined intermediate parameter having a computed value in accordance with a given set of input values which is capable of being manually overwritten by an end user* (column 14, lines 49-55: whereas, a part requirement table can have its computed data (that was calculated from input values) updated/overwritten by an end user).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, JR, and Kahn et al's spreadsheet script to further include the ability to define an end user intermediate parameter as taught by Takahashi

et al. The combination of Purcell, JR, Kan et al, and Takahashi et al would have allowed Purcell, JR's system to have allowed user more pre-emptive control over the calculation and processing of a production graph.

With regards to claim 9, for a method performing a method similar to that of the system in claim 2, and is rejected under the same rationale.

With regards to claim 10, for a method performing a method similar to that of the system in claim 3, and is rejected under the same rationale.

With regards to claim 11, for a method performing a method similar to that of the system in claim 4, and is rejected under the same rationale.

With regards to claim 12, for a method performing a method similar to that of the system in claim 5, and is rejected under the same rationale.

With regards to claim 16, for a medium storing instructions that when executed, perform a similar method to the system in claim 2, and is rejected under the same rationale.

With regards to claim 17, for a medium storing instructions that when executed, perform a similar method to the system in claim 3, and is rejected under the same rationale.

With regards to claim 18, for a medium storing instructions that when executed, perform a similar method to the system in claim 4, and is rejected under the same rationale.

With regards to claim 19, for a medium storing instructions that when executed, perform a similar method to the system in claim 5, and is rejected under the same rationale.

7. Claims 6,7, 13, 14, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell, JR (US Patent: 5,727, 161, issued: Mar. 10, 1998, filed: Sep. 16, 1994) and Khan et al (US Patent 6,157,934) in further view of Bourdead'hui et al. (US Patent: 5,995,719, issued: Nov. 30, 1999, filed: Mar 25, 1997).

With regards to claim 6, which is dependent on claim 1, Purcell, JR, and Khan et al teach a system wherein *the end user customizable computer spreadsheet application based expert system is designed for providing information regarding an intent for producing at least one unit of product* (workflow product), in claim 1, and is rejected under the same rationale. However, Purcell, JR, and Khan et al do not teach a system wherein at least one unit of *printed finished product, and is capable of receiving impositioning information regarding its printed components.*

Bourdead'hui et al teaches at least one unit of *printed finished product* (column 1, lines 25-28: whereas printed paper goes through a finishing stage), *and is capable of receiving impositioning information regarding its printed components* for proofing (Abstract: whereas, the finished product to be printed includes impositioning data for each component/paper-product, and a system uses the impositioning data for proofing).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, JR and Kahn et al's spreadsheet modeling application to further include modeling data for producing printed finished products and

receiving impositioning data, as taught by Bourdead'hui et al. The combination of Purcell, JR, Khan et al, and Bourdead'hui et al would have allowed Purcell, JR to have implemented a simulated the results of printing an imposed document (Bourdead'hui et al, column 2, lines 37-42)

With regards to claim 7, which depends on claim 6, Purcell, JR, and Kahn et al teach wherein the end user customizable computer spreadsheet application based expert system, as explained in claim 1, and is rejected under the same rationale. Furthermore, the computer spreadsheet application includes linking of spreadsheets that are also taught by Purcell, JR, and Kahn et al, as explained in claim 1, and is rejected under the same rationale. The linked spreadsheets blocks shown by Kahn et al include at least three spreadsheet blocks as seen in Kahn et al's Fig 1 diagram.

Although Purcell, JR and Kahn et al teach at least three spreadsheet blocks, they do not explicitly teach *the a first spreadsheet block for modeling the production of paper components of a printed finished product, a second spreadsheet block for modeling the production of non-paper components of a printed finished product, and a third spreadsheet block for modeling the integrating of at least one paper component and/or at least one integrated component and/or at least one non-paper component.*

The spreadsheet models taught by Purcell, JR and Kahn et al can be modeled '*for*' any particular criteria, and is merely an intent of use for a spreadsheet model. For the purpose of clarity and supplemental information, the Examiner will include a reference.

Bourdead'hui et al teaches *production of paper components*: whereas a printing stage in production is taught (column 1, lines 15-21)), *non-paper components* (whereas a pre-printing/pre-press stage is taught (column 1, lines 21-25: which includes non-paper components)), an *integration of at least one non-paper and at least one paper component* (whereas a finished production stage is taught, which integrates non-paper components and paper components together for a finished product (column 1, lines 26-28)).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Purcell, JR, and Kahn et al's spreadsheet modeling system to further three spreadsheets such that each of them are modeled according to different models/stages such as for production of paper components, non-paper components, or an integration of non-paper and paper components as taught by Bourdead'hui et al. The combination of Purcell, JR, Kahn et al, and would have allowed the Purcell, JR's spreadsheet modeling system to be specialized for developing models for the paper production and printing industry.

With regards to claim 13, for a method performing a method similar to that of the system in claim 6, and is rejected under the same rationale.

With regards to claim 14, for a method performing a method similar to that of the system in claim 7, and is rejected under the same rationale.

With regards to claim 20, for a medium storing instructions that when executed, perform a similar method to the system in claim 6, and is rejected under the same rationale.

With regards to claim 21, for a medium storing instructions that when executed, perform a similar method to the system in claim 7, and is rejected under the same rationale.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Corella et al (US Patent: 5,835,683, issued: Nov. 10, 1998, filed: Jan. 12, 1995): This reference teaches an expert system implementing spreadsheet technology, user dialog/prompts, and convergent analysis upon case by case basis.
- Handsaker et al (US Application: US 2003/0110191 A1, published: Jun. 12, 2003, filed: Jul.11, 2002, EEFD: Jul. 11, 2002): This reference teaches the referencing or linking of data external to spreadsheets.
- Ahmed (US Application: US 2002/0107824 A1, published: Aug. 8, 2002, filed: Jan. 8, 2001, EEFD: Jan 6, 2000): This reference teaches an expert system that utilizes dialog prompting, spreadsheet scripting, ranking, and selection of input parameters.
- Collier et al (US Patent: 5,815,152, issued: Sep. 29, 1998, filed: Jun. 19, 1997): This reference teaches an expert system that is designed by graphically laying out an input graph to create rules. The expert system can be implemented in several software applications including spreadsheets.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wilson Tsui whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W. T. 4/28/06

Wilson Tsui
Patent Examiner
Art: 2178
April 28, 2006

STEPHEN HONG
SUPERVISORY PATENT EXAMINER